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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/002,218	11/01/2001	Peter R. Kalkbrenner	100.230US01	4098

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EXAMINER

BUI, HUNG S

ART UNIT	PAPER NUMBER
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2841

DATE MAILED: 12/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/002,218

Applicant(s)

KALKBRENNER, PETER R.

Examiner

Hung S Bui

Art Unit

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Le et al [US 5,038,308] in view of Radloff et al. [US 5,544,006].

Regarding claims 1, Le et al. disclose a mounting apparatus (figure 3) comprising:

- at least one first block (230) secured within a housing (109), the at least first block having first and second grooves (232, 234) for respectively to receive a first edge of a first printed circuit board (210) and a first edge of a second printed circuit board (212) such that the first and second printed circuit boards are aligned each other and are space apart; and
- at least one second block (figure 3) secured within the housing (109), the at least second block having first and second grooves (figure 3) for respectively to receive a second edge of the first printed circuit board (210) that is perpendicular to the first edge of the first printed circuit board, the at least one second block having a surface to which the second printed circuit board is attached adjacent a second edge of the second printed circuit board that is perpendicular to the first edge of the second printed circuit board.

Le et al. disclose the instant claimed invention except for at least one of the first and second grooves in the at least one first block being tapered.

Radloff et al. disclose a circuit board support (36) having a tapered slot (82, figure 6).

It would have been obvious to a person having ordinary skill in the art at the time invention was made to use the tapered slot design of Radloff et al. for the grooves of the first block of Le et al., for the purpose of facilitating mounting of the printed circuit board.

Regarding claim 2, Le et al., as modified, disclose the instant claimed invention except for the at least one first block comprising a plurality of first blocks.

The number of the first blocks used would have been in obvious design consideration based on the side of printed circuit board to be supported.

Regarding claim 3, Le et al., as modified, disclose the instant claimed invention except for the at least one second block comprising a plurality of second blocks.

The number of the second blocks used would have been in obvious design consideration based on the side of printed circuit board to be supported.

Regarding claim 10, Le et al. disclose a mounting apparatus (figure 3) comprising:

- at least one first block (230) secured within a housing (109), the at least first block having first and second grooves (232, 234) for respectively to receive a first edge of a first printed circuit board (210) and a first edge of a second printed circuit board (212) such that the first and second printed circuit boards are aligned each other and are space apart; and

- at least one second block (figure 3) secured within the housing (109), the at least second block having first and second grooves (figure 3) for respectively to receive a second edge of the first printed circuit board (210) that is perpendicular to the first edge of the first printed circuit board, the at least one second block having a surface to which the second printed circuit board is attached adjacent a second edge of the second printed circuit board that is perpendicular to the first edge of the second printed circuit board.

Le et al. disclose the instant claimed invention except for at least one of the first and second grooves in the at least one first block being tapered, the at least one first block comprising a plurality of first blocks and the at least one second block comprising a plurality of second blocks.

Radloff et al. disclose a circuit board support (36) having a tapered slot (82, figure 6).

It would have been obvious to a person having ordinary skill in the art at the time invention was made to use the tapered slot design of Radloff et al. for the grooves of the first block of Le et al., for the purpose of facilitating mounting of the printed circuit board.

The number of the first and second blocks used would have been in obvious design consideration based on the side of printed circuit board to be supported.

3. Claims 5, 7, 11, 13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Le et al., as modified, as applied to claim 1 above, and further in view of Varnau et al. [US 4,309,856].

Regarding claims 5, 7, 11, 13 and 16, Le et al., as modified, disclose the instant claimed invention except for the surface of the at least one second block comprised a surface of a projection of the at least one second block, the projection having an aperture passing therethrough.

Varnau et al. further teaches a standoff support means including a projection (38, figure 2) with an aperture (figure 1).

It would have been obvious to a person having ordinary skill in the art at the time invention was made to use the projection including an aperture in the blocks of Le et al., as modified, for the purpose of retaining the circuit board in place.

4. Claims 6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Le et al., as modified, as applied to claim 5 above, and further in view of Burns [US 5,008,777].

Regarding claims 6 and 12, Le et al., as modified, disclose the instant claimed invention except for the aperture being threaded.

Burns discloses a circuit board standoff (30) having a threaded aperture (32) cooperating with a screw (40) aligned with and supporting a circuit board (20) to the standoff (figure 3).

It would have been obvious to a person having ordinary skill in the art at the time invention was made to use threading design for the aperture of Le et al., as modified, as suggested by Burns, for the purpose of firmly retaining and securing the circuit boards in the standoff.

5. Claims 8 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Le et al., as modified, as applied to claim 1 above, and further in view of Speraw et al. [US 5,018,982].

Regarding claims 8 and 14-15, Le et al., as modified, disclose the instant claimed invention except for at least one of the blocks having holes passing therethrough to retain at least one of the blocks to the housing.

Speraw et al. disclose a standoff means (40) for a circuit board (11-13) being secured to a base (15) by means of a fastener (19) extending through a hole within the standoff (figure 1).

It would have been obvious to a person having ordinary skill in the art at the time invention was made to use the mounting means of Speraw et al. for the blocks of Le et al., as modified, for the purpose of securing the blocks within the housing.

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Le et al., as modified, as applied to claim 8 above, and further in view of Clements [US 6,122,176].

Regarding claim 9, Le et al., as modified, disclose the instant claimed invention except for the blocks being secured to the base of the housing by means of an elongated hole.

Clements discloses a standoff design (502, 504, 506) using an elongated hole for the standoff fastener support mount.

It would have been obvious to a person having ordinary skill in the art at the time invention was made to use the elongated hole design of Clements with Le et al., as modified, for the purpose of permitting adjustability of the standoff mounting.

Response to Arguments

7. Applicant's arguments with respect to claims 1-3 and 5-16 have been considered but are moot in view of the new ground(s) of rejection.

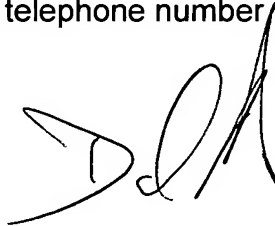
Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung S Bui whose telephone number is (703) 305-8024. The examiner can normally be reached on Monday-Friday 8:30AM-6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David S. Martin can be reached on (703) 308-3121. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-0956.

HB
12/17/02



**DAVID MARTIN
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